

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-7, 9-18, and 20-26 are currently pending. Claims 1-6, 9, 11, 15, 17, 20, 22, and 26 have been amended; and Claims 8 and 19 have been canceled without prejudice by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, Claims 1-23, 25, and 26 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,082,107 to Arvelo (hereinafter “the ‘107 patent”); and Claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘107 patent in view of U.S. Patent Application Publication No. 2004/0032853 to D’Amico et al. (hereinafter “the ‘853 application”).

Amended Claim 1 is directed to a method of deciding a transmit power level carried out by a wireless terminal and a mobile communication system comprising the steps of: (1) deciding a multiplex number of uplink control signals by counting a multiplex number of downlink control signals corresponding thereto; and (2) deciding a transmit power level according to the decided multiplex number of uplink control signals. The changes to Claim 1 are supported by the originally filed specification and do not add new matter.¹

Applicants respectfully submit that the rejection of Claim 1 is rendered moot by the present amendment to that claim.

The ‘107 patent is directed to a system for controlling the power level of a wireless transmission based on whether a number of packet errors in an observation time window exceeds a predetermined threshold. As shown in Figure 3, the ‘107 patent discloses a system in which a transmitter 310 counts the negative acknowledgement (NACK) messages 340 (in

¹ See, e.g., step S103 in Figure 4 and the discussion related thereto in the specification.

both a short and long observation window) and compares the number of errors to respective thresholds. If the power level of the transmitter 310 needs to be adjusted to achieve the desired signal quality, the transmitter 310 either increases or decreases the power level based on the number of errors counted. Further, the '107 patent discloses that, in the open loop form, the receiver does not decide when the power level needs to be adjusted, but the transmitter decides for itself when to adjust the power.

However, Applicants respectfully submit that the '107 patent fails to disclose the step of deciding a multiplexed number of uplink control signals by counting a multiplex number of downlink control signals corresponding thereto, as recited in amended Claim 1. In a non-limiting example, Applicants note that step S103 in Figure 4 discloses that the wireless terminal counts the number of other downlink control signals sent in a same time slot from the base station. On the contrary, the system disclosed by the '107 patent merely counts the number of negative acknowledgment messages sent from the receiver during a particular observation time window and compares the count to a predetermined threshold. However, the '107 patent does not disclose that counting a number of downlink control signals corresponding to a multiplex number of uplink control signals is used to determine a transmit power level. Further, Applicants note that the method of Claim 1 is carried out by the wireless terminal, which would correspond to the receiver 320 disclosed in Figure 3 of the '107 patent. However, the '107 patent discloses that the transmitter 310 determines the transmit power level.

Accordingly, for the reasons stated above, Applicants respectfully submit that amended Claim 1 patentably defines over the '107 patent.

Independent Claims 3, 6, and 17 recite limitations analogous to the limitations recited in Claim 1. Moreover, Claims 3, 6, and 17 have been amended in a manner analogous to the amendment to Claim 1. In particular, Applicants note that Claim 6 has been amended to

incorporate the limitations recited in dependent Claim 8, i.e., that the multiplex number deciding means decides the multiplex number of uplink control signals according to a multiplex number of downlink control signals corresponding thereto. Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 1, Applicants respectfully submit that the rejections of Claims 3, 6, and 17 (and all associated dependent claims) are rendered moot by the present amendment to Claims 3, 6, and 17.

Amended Claim 2 is directed to a method of deciding a transmit power level carried out by a wireless terminal in a mobile communication system comprising: (1) estimating a quality of an uplink control signal by determining whether a base station correctly received at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminal; and (2) deciding a transmit power level according to the estimated quality of the uplink control signal. The changes to Claim 2 are supported by the originally filed specification and do not add new matter.²

As discussed above, the '107 patent is directed to a system in which a transmitter counts the number of negative acknowledgement messages received from a receiver over a predetermined observation time window and compares the number of errors to a threshold. Based on the results of the comparison, the transmitter 310 in the '107 system adjusts the transmit power level. However, Applicants respectfully submit that the '107 patent fails to disclose the step of estimating a quality of an uplink control signal by determining whether a base station correctly receives at least of acknowledgement and negative acknowledgment information signals transmitted by the wireless terminal, as recited in amended Claim 2. Rather, the '107 patent merely counts the number of negative acknowledgement signals received from the receiver. The '107 patent does not disclose that a determination is made by the receiver as to whether the transmitter correctly received the negative acknowledgement or

² See, e.g., Figures 7A and 7B and the discussion related thereto in the specification.

acknowledgement signals sent by the receiver. In this regard, in a non-limiting example, Applicants respectfully address the Examiner's attention to the flowchart shown in Figures 7A and 7B. As shown in steps 205-215, in a non-limiting example, the present system determines, at the wireless terminal, whether the base station correctly received either the negative acknowledgement signal or the acknowledgement signal previously sent by the wireless terminal to the base station. The '107 patent does not teach or suggest such a limitation. Accordingly, Applicants respectfully submit that the rejection of Claim 2 is rendered moot by the present amendment to that claim.

Independent Claims 4, 5, 11, 22, and 26 recite limitations analogous to the limitations recited in Claim 2. Moreover, Claims 4, 5, 11, 22, and 26 have been amended in a manner analogous to the amendment to Claim 2. Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 2, Applicants respectfully submit that the rejections of Claims 4, 5, 11, 22, and 26 (and all similarly rejected dependent claims) are rendered moot by the present amendment to the independent claims.

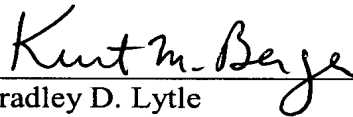
Regarding the rejection of dependent Claim 24 under 35 U.S.C. § 103(a), Applicants respectfully submit that the '853 application fails to remedy the deficiencies of the '107 patent, as discussed above. Accordingly, Applicants respectfully submit that the rejection of Claim 24 is rendered moot by the present amendment to Claim 22.

Thus, it is respectfully submitted that independent Claims 1-6, 11, 17, 22, and 26 (and all associated dependent claims) patentably define over any proper combination of the '107 patent and the '853 application.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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